

7/17

# 6

OIE

Serial Number: 10/084,553

CRF Processing Date:

7/31/02

Edited by:

Verified by:

DC

(STIC staff)

 Changed a file from non-ASCII to ASCII Changed the margins in cases where the sequence text was "wrapped" down to the next line. Edited a format error in the Current Application Data section, specifically: Edited the Current Application Data section with the actual current number. The number inputted by the applicant was  the prior application data; or  other \_\_\_\_\_. Added the mandatory heading and subheadings for "Current Application Data". Edited the "Number of Sequences" field. The applicant spelled out a number instead of using an integer. Changed the spelling of a mandatory field (the headings or subheadings), specifically: Corrected the SEQ ID NO when obviously incorrect. The sequence numbers that were edited were: Inserted or corrected a nucleic number at the end of a nucleic line. SEQ ID NO's edited: Corrected subheading placement. All responses must be on the same line as each subheading. If the applicant placed a response below the subheading, this was moved to its appropriate place. Inserted colons after headings/subheadings. Headings edited included: Deleted extra, invalid, headings used by an applicant, specifically: Deleted:  non-ASCII "garbage" at the beginning/end of files;  secretary initials/filename at end of file;  page numbers throughout text;  other invalid text, such as \_\_\_\_\_. Inserted mandatory headings, specifically: L2207 in Seq. 2 Corrected an obvious error in the response, specifically: Edited identifiers where upper case is used but lower case is required, or vice versa. Corrected an error in the Number of Sequences field, specifically: A "Hard Page Break" code was inserted by the applicant. All occurrences had to be deleted. Deleted ending stop codon in amino acid sequences and adjusted the "(A)Length:" field accordingly (error due to a PatentIn bug). Sequences corrected: \_\_\_\_\_ Other:  
\_\_\_\_\_  
\_\_\_\_\_



OIPE

RAW SEQUENCE LISTING DATE: 07/31/2002  
PATENT APPLICATION: US/10/084,553 TIME: 12:41:33

Input Set : A:\PTO.DC.txt  
Output Set: N:\CREF3\07312002\J084553.raw

3 <110> APPLICANT: Tobin, Elaine  
4       Wang, Zhi-Yong  
5       Sun, Lin  
6       The Regents of the University of California  
8 <120> TITLE OF INVENTION: Phytochrome Regulated Transcription Factor for Control  
9       of Higher Plant Development  
11 <130> FILE REFERENCE: 023070-124200US  
13 <140> CURRENT APPLICATION NUMBER: US 10/084,553  
C--> 14 <141> CURRENT FILING DATE: 2002-07-09  
16 <150> PRIOR APPLICATION NUMBER: US 08/843,572  
17 <151> PRIOR FILING DATE: 1997-04-18  
19 <160> NUMBER OF SEQ ID NOS: 27  
21 <170> SOFTWARE: PatentIn Ver. 2.1  
23 <210> SEQ ID NO: 1  
24 <211> LENGTH: 4344  
25 <212> TYPE: DNA  
26 <213> ORGANISM: Arabidopsis thaliana  
28 <220> FEATURE:  
29 <223> OTHER INFORMATION: phytochrome-regulated transcriptional factor CCA1  
30       genomic clone  
32 <220> FEATURE:  
33 <221> NAME/KEY: exon  
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36 <220> FEATURE:  
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38 <222> LOCATION: (1371)..(1448)  
40 <220> FEATURE:  
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42 <222> LOCATION: (1449)..(1560)  
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46 <222> LOCATION: (1561)..(1648)  
48 <220> FEATURE:  
49 <221> NAME/KEY: exon  
50 <222> LOCATION: (1649)..(1710)  
52 <220> FEATURE:  
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54 <222> LOCATION: (1711)..(2189)  
56 <220> FEATURE:  
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58 <222> LOCATION: (2190)..(2384)  
60 <220> FEATURE:  
61 <221> NAME/KEY: intron

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147	atatgtctta ttttttgtt ttgcagaggt ttgtcttcaa	actgatttgc ttttttcat	1640	
149	ttggacag aa cat gta gca aca aaa act gct gtc	cag ata aga agt cac	1689	
150	Glu His Val Ala Thr Lys Thr Ala Val Gln Ile	Arg Ser His		
151	55	60		
153	gct cag aaa ttt ttc tcc aag gtaaaatcgg	ttaatttga aatgatgtc	1740	
154	Ala Gln Lys Phe Phe Ser Lys			
155	65	70		
157	tcatcttcat tggcttaatg cttaagactt attgaaagcc	aggcaagttt tctgcttctt	1800	
159	ttgcttctta gtcaggagat agatagatta	cgttttaga gtttagtaat gagcaataag	1860	
161	cttaaaata gttggagaaa tgacgagatg taatcgttt	ctttgttta tgcctataatc	1920	
163	ttgttaatcc acaaacatgt acatagattc ttccagaagaa	tgttagttc tttagattct	1980	
165	ttagataaac ttgtgtcttc ttaccgatc tgaggtatgt	gcaaaaagtgg gctgagtgct	2040	
167	agaaaattttt gaatgttcct tgtgataagc catagaggtt	aaccattttt gatTTTCCAG	2100	
169	ttctgtcatt taaactgtt aggtgtcatt agatTTTGT	ttgtttacgt ttgttttagag	2160	
171	gttaacaaaaa ctactctcat ctctctcag gta gag aaa	gag gct gaa gct aaa	2213	
172	Val Glu Lys Glu Ala Glu Ala Lys			
173	75			
175	ggt gta gct atg ggt caa gcg cta gac ata gct	att cct cct cca cgg	2261	
176	Gly Val Ala Met Gly Gln Ala Leu Asp Ile Ala	Ile Pro Pro Pro Arg		
177	80	85	90	95
179	cct aag cgt aaa cca aac aat cct tat cct cga	aag acg gga agt gga	2309	
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183	acg atc ctt atg tca aaa acg ggt gtg aat gat	gga aaa gag tcc ctt	2357	
184	Thr Ile Leu Met Ser Lys Thr Gly Val Asn Asp	Gly Lys Glu Ser Leu		
185	115	120	125	
187	gga tca gaa aaa gtg tcg cat cct gag gtgatttca	tggtcatatgt	2404	
188	Gly Ser Glu Lys Val Ser His Pro Glu			
189	130	135		
191	gcatctttt gcagtgtgc acattgctcc tcatgttatt	aatacagatt gtgtgcttcg	2464	
193	ttttagatg gcc aat gaa gat cga caa tca aag	cct gaa gag aaa	2513	
194	Met Ala Asn Glu Asp Arg Gln Gln Ser Lys	Pro Glu Glu Lys		
195	140	145	150	
197	act ctg cag gaa gac aac tgt tca gat tgt ttc	act cat cag tat ctc	2561	
198	Thr Leu Gln Glu Asp Asn Cys Ser Asp Cys	Phe Thr His Gln Tyr Leu		
199	155	160	165	
201	tct gct gca tcc tcc atg aat aaa agt tgt ata	gag aca tca aac gca	2609	
202	Ser Ala Ala Ser Ser Met Asn Lys Ser Cys Ile	Glu Thr Ser Asn Ala		
203	170	175	180	
205	agc act ttc cgc gag ttc ttg cct tca cgg gaa	gag gtaaaaaaaaaca	2655	
206	Ser Thr Phe Arg Glu Phe Leu Pro Ser Arg	Glu Glu		
207	185	190		
209	atctttcatt gctatttgag gttttaagac gattagtaact	tttcatgaaaa ctaaaaccgt	2715	
211	ggggaaataa cag gga agt cag aat aac agg gta	aga aag gag tca aac	2764	
212	Gly Ser Gln Asn Asn Arg Val Arg Lys Glu Ser	Asn		
213	195	200	205	

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216	Ser	Asp	Leu	Asn	Ala	Lys	Ser	Leu	Glu	Asn	Gly	Asn	Glu	Gln	Gly	Pro	
217								210								220	
219	cag	act	tat	ccg	atg	cat	atc	cct	gtg	cta	gtg	cca	ttg	ggg	agc	tca	2860
220	Gln	Thr	Tyr	Pro	Met	His	Ile	Pro	Val	Leu	Val	Pro	Leu	Gly	Ser	Ser	
221								225								235	
223	ata	aca	agt	tct	cta	tca	cat	cct	cct	tca	gag	cca	gat	agt	cat	ccc	2908
224	Ile	Thr	Ser	Ser	Leu	Ser	His	Pro	Pro	Ser	Glu	Pro	Asp	Ser	His	Pro	
225								240								250	
227	cac	aca	gtt	gca	gga	gat	tat	cag	tcg	ttt	cct	aat	cat	ata	atg	tca	2956
228	His	Thr	Val	Ala	Gly	Asp	Tyr	Gln	Ser	Phe	Pro	Asn	His	Ile	Met	Ser	
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231	acc	ctt	tta	caa	aca	ccg	gct	ctt	tat	act	gcc	gca	act	ttc	gcc	tca	3004
232	Thr	Leu	Leu	Gln	Thr	Pro	Ala	Leu	Tyr	Thr	Ala	Ala	Thr	Phe	Ala	Ser	
233								275								285	
235	tca	ttt	tgg	cct	ccc	gat	tct	agt	ggt	ggc	tca	cct	gtt	cca	ggg	aac	3052
236	Ser	Phe	Trp	Pro	Pro	Asp	Ser	Ser	Gly	Gly	Ser	Pro	Val	Pro	Gly	Asn	
237								290								300	
239	tca	cct	ccg	aat	ctg	gct	gcc	atg	gcc	gca	gcc	act	gtt	gca	gct	gct	3100
240	Ser	Pro	Pro	Asn	Leu	Ala	Ala	Met	Ala	Ala	Ala	Thr	Val	Ala	Ala	Ala	
241								305								315	
243	agt	gct	tgg	tgg	gct	aat	gga	tta	tta	cct	tta	tgt	gct	cct	ctt	3148	
244	Ser	Ala	Trp	Trp	Ala	Ala	Asn	Gly	Leu	Leu	Pro	Leu	Cys	Ala	Pro	Leu	
245								320								330	
247	agt	tca	ggg	ggg	tgc	act	agt	cat	cct	cca	tct	act	ttt	gga	cca	tca	3196
248	Ser	Ser	Gly	Gly	Phe	Thr	Ser	His	Pro	Pro	Ser	Thr	Phe	Gly	Pro	Ser	
249	335							340								350	
251	tgt	gat	gta	gag	tac	aca	aaa	gca	agc	act	tta	caa	cat	ggg	tct	gtg	3244
252	Cys	Asp	Val	Glu	Tyr	Thr	Lys	Ala	Ser	Thr	Leu	Gln	His	Gly	Ser	Val	
253								355								365	
255	cag	agc	cga	gag	caa	gaa	cac	tcc	gag	gca	tca	aag	gct	cga	tct	tca	3292
256	Gln	Ser	Arg	Glu	Gln	Glu	His	Ser	Glu	Ala	Ser	Lys	Ala	Arg	Ser	Ser	
257								370								380	
259	ctg	gac	tca	gag	gat	gtt	gaa	aat	aag	agt	aaa	cca	gtt	tgt	cat	gag	3340
260	Leu	Asp	Ser	Glu	Asp	Val	Glu	Asn	Lys	Ser	Lys	Pro	Val	Cys	His	Glu	
261								385								395	
263	cag	cct	tct	gca	aca	cct	gag	agt	gat	gca	aag	ggg	tca	gat	gga	gca	3388
264	Gln	Pro	Ser	Ala	Thr	Pro	Glu	Ser	Asp	Ala	Lys	Gly	Ser	Asp	Gly	Ala	
265								400								410	
267	gga	gac	aga	aaa	caa	gtt	gac	cg	tcc	tcg	tgt	ggc	tca	aac	act	ccg	3436
268	Gly	Asp	Arg	Lys	Gln	Val	Asp	Arg	Ser	Ser	Cys	Gly	Ser	Asn	Thr	Pro	
269	415							420								430	
271	tcg	agt	agt	gat	gat	gtt	gag	g	cg	gat	gca	tca	gaa	agg	caa	gag	3484
272	Ser	Ser	Ser	Asp	Asp	Val	Glu	Ala	Asp	Ala	Ser	Glu	Arg	Gln	Glu	Asp	
273								435								445	
275	ggc	acc	aat	gg	gt	gag	aaa	gaa	ac	g	a	g	ac	act	aat	aaa	3532
276	Gly	Thr	Asn	Gly	Glu	Val	Lys	Glu	Thr	Asn	Glu	Asp	Thr	Asn	Lys	Pro	
277								450								460	
279	caa	act	tca	gag	tcc	aat	gca	cgc	cgc	agt	aga	atc	agc	tcc	aat	ata	3580

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284 Thr Asp Pro Trp Lys Ser Val Ser Asp Glu
285      480      485
287 tcaacttcct ttatttcaaa tcattttctc atataaatat tgtacattcg ggt cga      3686
288                               Gly Arg
289                               490
291 att gcc ttc caa gct ctc ttc tcc aga gag gta ttg ccg caa agt ttt      3734
292 Ile Ala Phe Gln Ala Leu Phe Ser Arg Glu Val Leu Pro Gln Ser Phe
293      495      500      505
295 aca tat cga gaa gaa cac aga gag gaa gaa caa caa caa caa gaa caa      3782
296 Thr Tyr Arg Glu Glu His Arg Glu Glu Gln Gln Gln Gln Glu Gln
297      510      515      520
299 aga tat cca atg gca ctt gat ctt aac ttc aca gct cag tta aca cca      3830
300 Arg Tyr Pro Met Ala Leu Asp Leu Asn Phe Thr Ala Gln Leu Thr Pro
301      525      530      535
303 gtt gat gat caa gag gag aag aga aac aca gga ttt ctt gga atc gga      3878
304 Val Asp Asp Gln Glu Glu Lys Arg Asn Thr Gly Phe Leu Gly Ile Gly
305      540      545      550
307 tta gat gct tca aag cta atg agt aga gga aga aca ggt ttt aaa cca      3926
308 Leu Asp Ala Ser Lys Leu Met Ser Arg Gly Arg Thr Gly Phe Lys Pro
309      555      560      565      570
311 tac aaa aga tgt tcc atg gaa gcc aaa gaa agt aga atc ctc aac aac      3974
312 Tyr Lys Arg Cys Ser Met Glu Ala Lys Glu Ser Arg Ile Leu Asn Asn
313      575      580      585
315 aat cct atc att cat gtg gaa cag aaa gat ccc aaa cgg atg cgg ttg      4022
316 Asn Pro Ile Ile His Val Glu Gln Lys Asp Pro Lys Arg Met Arg Leu
317      590      595      600
319 gaa act caa gct tcc aca tga gactctattt tcatctgatc tggtgttgt      4073
320 Glu Thr Gln Ala Ser Thr
321      605
323 actctgttt taagtttca agaccactgc tacatTTCT tttcttttg aggctttgt 4133
325 atttgtttcc ttgtccatag tttcctgtt acatttgact ctgttattt caacaatca 4193
327 taaactgttt aatcttttt tttccaaacct ggaaagaact tcactcaagg ggctttgtt 4253
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**VERIFICATION SUMMARY**

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L:14 M:271 C: Current Filing Date differs, Replaced Current Filing Date